

IN THE SPECIFICATION

Please replace the paragraph 0050, with the following rewritten paragraph:

[0050] The upper opening 54 can be connected to the equalization conduit 106 by one or more conduits, with each conduit having a valve therein. Preferably, the upper opening 54 of the vessel 50 is connected to the equalization conduit 106 via a first conduit 56 and a second conduit 58. The conduits 56 and 58 have valves 50C and 50D, respectively, which control the flow of fluid between the equalization conduit 106 and the vessel 50. The valves 50C and 50D are configured to operate in the same manner as valves 10C and 10D described ~~about~~ above with respect to the four vessel PSA system 1A. Alternatively, the PSA system of the present invention can include a single conduit and valve connecting each vessel with the equalization conduit 106, or three or more conduits and valves can be used to connect each vessel with the equalization conduit 106 depending upon the flow characteristics desired in the PSA system.

Please replace the paragraph 0068, with the following rewritten paragraph:

[0068] The remaining adsorption vessels 20, 30, 40, and 50 follow the same sequence of steps, however, each of the sequence of steps are offset from the other vessels. The processes for each of the remaining adsorption vessels 20, 30, 40, and 50 are similar to that described above with regards to vessel 10; however, the various steps that require interaction between vessels will be performed using different vessels as specified in the PSA cycle diagram clearly set forth in Figure 3.

Please replace the paragraph 0098, with the following rewritten paragraph:

[0098] The preferred embodiment of the seven vessel PSA system 1D includes a first equalization conduit 108 and a second equalization conduit 110. The upper openings 14, 24, 34, 44, 54, 64, and 74, can be connected to each of the equalization conduits 108 and 110 by one or more conduits, with each conduit having a valve therein. Preferably, the upper openings 14, 24, 34, 44, 54, 64, and 74 are connected to the first equalization conduit 108 via first conduits 16, 26, 36, 46, 56, 66, and 76, respectively. The first conduits 16, 26, 36, 46, 56, 66, and 76 have valves 10C, 20C, 30C, 40C, 50C, 60C, and 70C, respectively, which control the flow of fluid between the first equalization conduit 108 and the vessels 10, 20, 30, 40, 50, 60, and 70, respectively. Preferably, the upper openings 14, 24, 34, 44, 54, 64, and 74 are connected to the second equalization conduit 110 via second conduits 18, 28, 38, 48, 58, 68, and 78, respectively. The second conduits 18, 28, 38, 48, 58, 68, and 78 have valves 10D, 20D, 30D, 40D, 50D, 60D, and 70D, respectively, which control the flow of fluid between the second equalization conduit 110 and the vessels 10, 20, 30, 40, 50, 60, and 70, respectively. The valves 70C and 70D are configured to operate in the same manner as valves 10C and 10D described ~~about~~ above with respect to the four vessel PSA system 1A. Alternatively, the PSA system of the present invention can include plural conduits and valves connecting each vessel with each equalization conduit 108 and 110 depending upon the flow characteristics desired in the PSA system.

Application Serial No.: 10/720,517
Reply to Office Action dated June 16, 2004

Please replace the paragraph 00117, with the following rewritten paragraph:

[00117] The present invention advantageously provides a PSA system having a structure that is not complex and that is capable of performing two, three, or more stages of pressure equalization in order to reduce fluid shock within the system. Fluid shock can decrease the life of the ~~absorbent~~ adsorbent by causing the adsorbent grains within the ~~absorbent~~ adsorbent bed to move and rub against one another, thereby breaking the grains down into smaller and smaller granules and creating an adsorbent sludge.